novasens Infrared Temperature Sensor IR402

At a glance

- High quality low-cost sensor for OEM applications
- Precise Germanium optics
- Thermocouple output type J or K or analog output 4-20 mA
- Robust sensor housing made of stainless steel
- Compact design due to integrated electronics in the sensor housing
- Low power supply: 6 – 24 VDC and 25 mA and 25 mA

The novasens IR402 infrared temperature sensor measures temperatures from -20°C to 250°C without contact and is equipped with a thermocouple output of type J or K or analog output 4-20 mA.

This output range is compatible with almost every machine control unit, PIB controller, display device, data logger, which have a thermocouple or analog input.
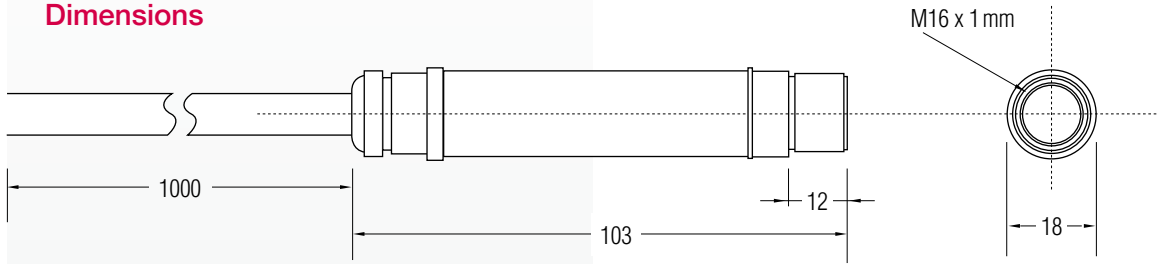
The sensor is suitable for contactless temperature measurement of materials such as food, paper, textiles, plastics, leather, tobacco, pharmaceuticals, chemicals, rubber, coal and asphalt.

Due to the low price, the sensor is suitable for the replacement of previous sliding contact sensors and PT measuring sensors and for use in OEM applications or in multi-point measurement.
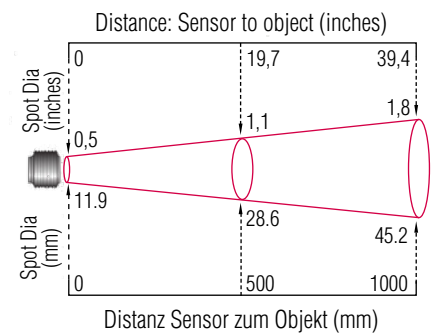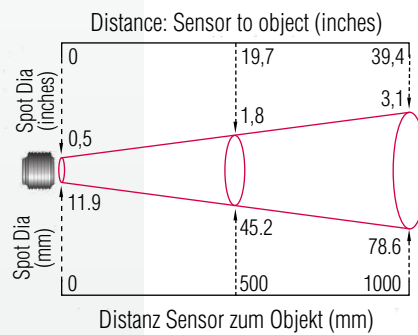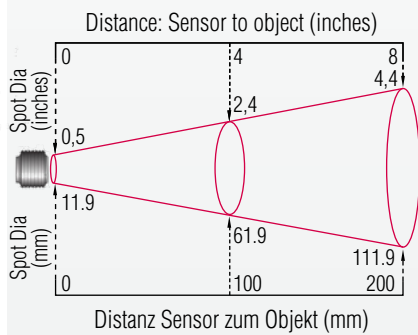
Specifications	
Measuring range	-20°C to +100°C 0°C to +250°C
Spectral range	8-14 µm
Emissivity correction	0,95 fixed
Dimensions	Length 103 mm x 18 mm Diameter with M16 x 1 thread
Permissible moisture	95 % not condensing
Permissible ambient temperature	0°C to +70°C uncooled
Distance to measuring spot/optical resolution	2:1 • 15:1 • 30:1
Accuracy	+/- 1% of reading
Repeat accuracy	0,5 % of the measured value
Reaction time T90	240 ms
Resolution	1/10°C
Outputs	4-20 mA analog output or thermocouple output type J or K
Output impedance	56 Ohm
Weight	95 grams (measuring head with 1 m cable)
Power supply	6-24 VDC (25 mA)
Protection class	IP65
Delivery scope	Sensor with 1m cable and mounting screw
Conformity	RoHS-Conformity, CE-Sign
Article number	0200402

Dimensions

M16 x 1 mm

1000

103

12

18

Optical Specifications

Distance: Sensor to object (inches)

Spot Dia (inches)

Spot Dia (mm)

Distanz Sensor zum Objekt (mm)

0	4	8
0,5	2,4	4,4
11.9	61.9	111.9
0	100	200

Distance: Sensor to object (inches)

0	19,7	39,4
0,5	1,8	3,1
11.9	45.2	78.6
0	500	1000

Distanz Sensor zum Objekt (mm)

Distance: Sensor to object (inches)

0	19,7	39,4
0,5	1,1	1,8
11.9	28.6	45.2
0	500	1000

Distanz Sensor zum Objekt (mm)

Options

Attachment for air cooling/lens cleaning

Sensor attachment for use in hot or dirty environments. With compressed air connection for air cooling and lens cleaning.
ArtNr. 0200AC

Attachment Laserpointer

Sensor attachment with laser pointer for precise alignment of the sensor over long measuring distances.
ArtNr. 0200LP

IR402-x-xxx-x Order Number

Sensor output

| 8 = Thermocouple Typ K, 4-Wire |
| 9 = Thermocouple Typ J, 4-Wire |
| 10 = 4-20 mA, 2-Wire |

Optical resolution

| 21 = 2:1 |
| 151 = 15:1 |
| 301 = 30:1 |

Measuring range

| A = -20°C to +100°C |
| B = 0°C to 250°C |

Technical changes reserved.